

This Page Is Inserted by IFW Operations  
and is not a part of the Official Record

## **BEST AVAILABLE IMAGES**

Defective images within this document are accurate representations of the original documents submitted by the applicant.

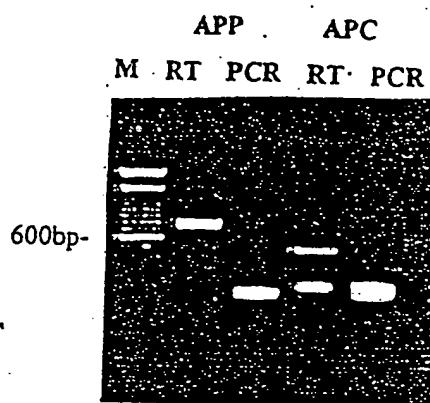
Defects in the images may include (but are not limited to):

- BLACK BORDERS
- TEXT CUT OFF AT TOP, BOTTOM OR SIDES
- FADED TEXT
- ILLEGIBLE TEXT
- SKEWED/SLANTED IMAGES
- COLORED PHOTOS
- BLACK OR VERY BLACK AND WHITE DARK PHOTOS
- GRAY SCALE DOCUMENTS

**IMAGES ARE BEST AVAILABLE COPY.**

**As rescanning documents *will not* correct images,  
please do not report the images to the  
Image Problem Mailbox.**

A



B

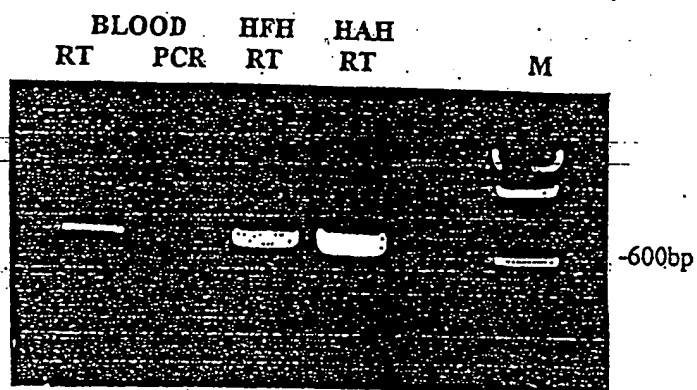


FIGURE 1

1 2 3 4 5 6 7 8

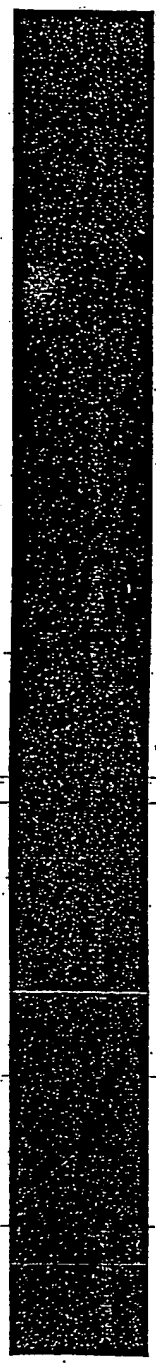


FIGURE 2

1 2 3 4

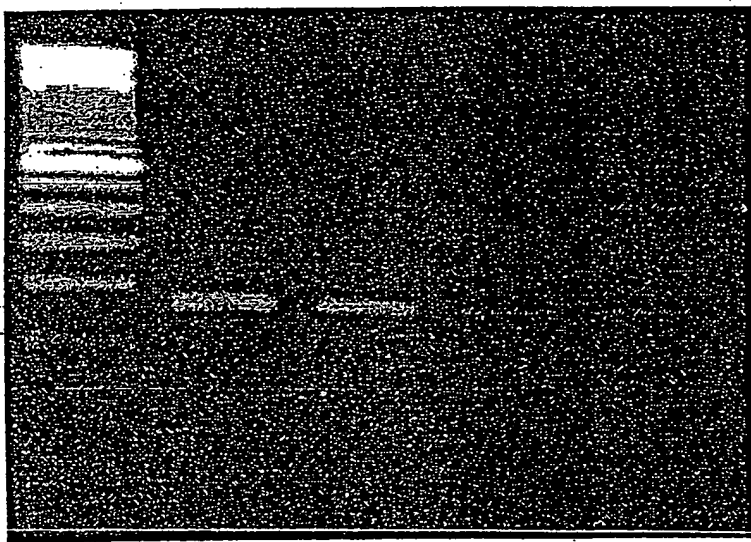


FIGURE 3

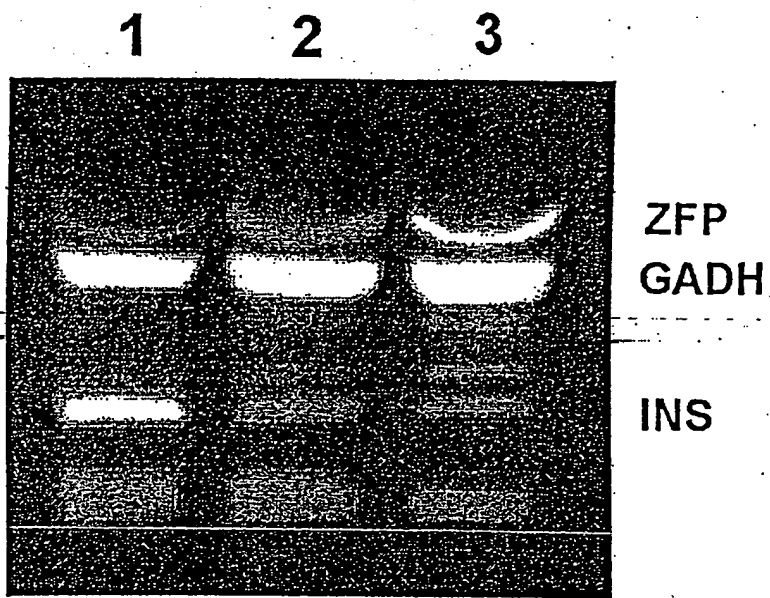
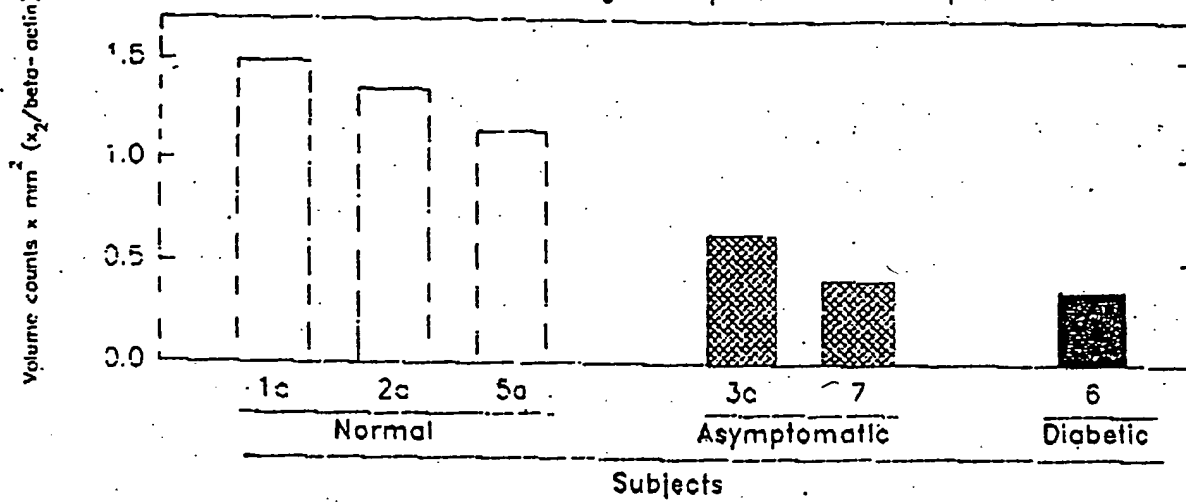


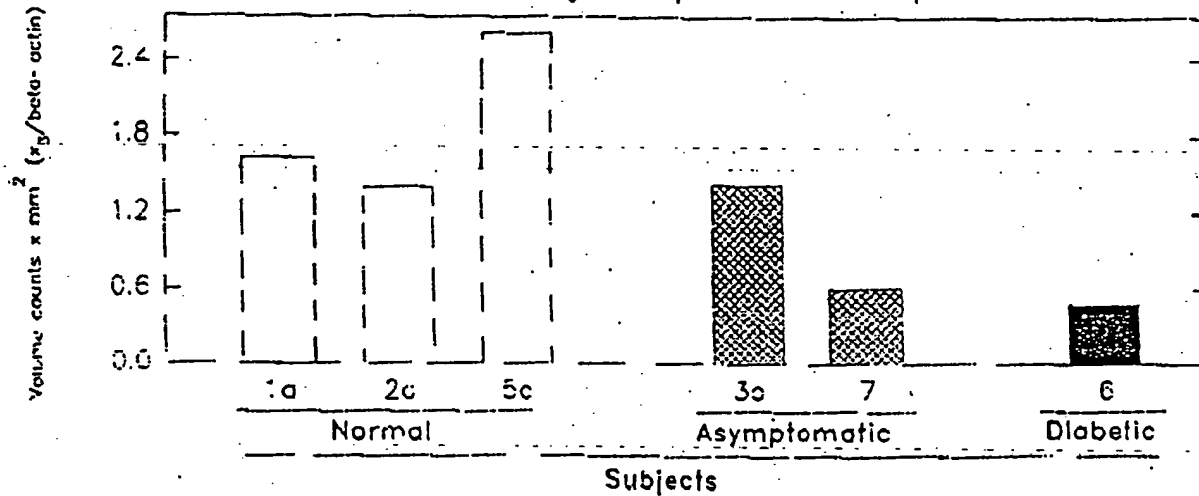
FIGURE 4

A. Standardized levels of Insulin gene expressed in a drop of blood.



B.

Standardized levels of ZFP gene expressed in a drop of blood.



C.

Standardized levels of insulin gene expressed in each fractionated cell from whole blood.

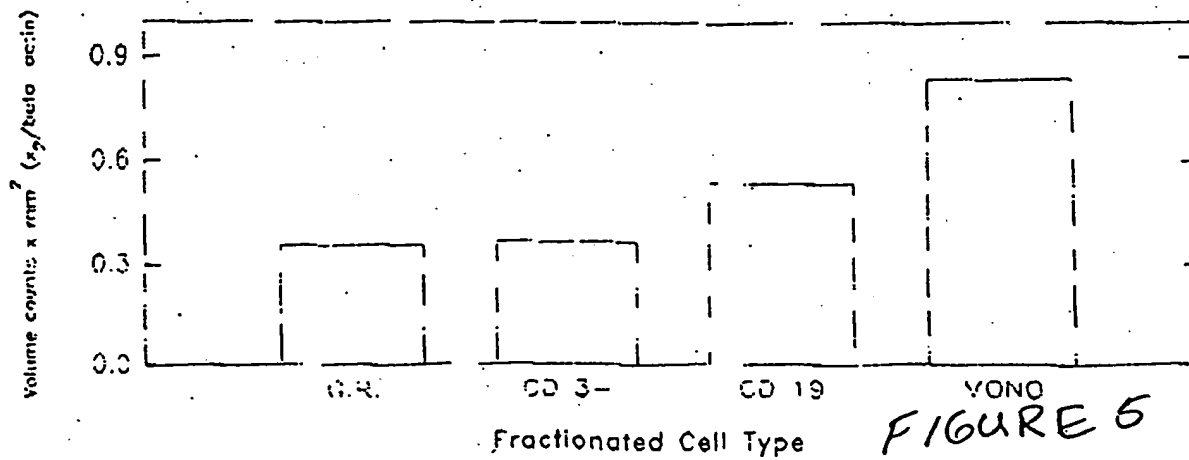
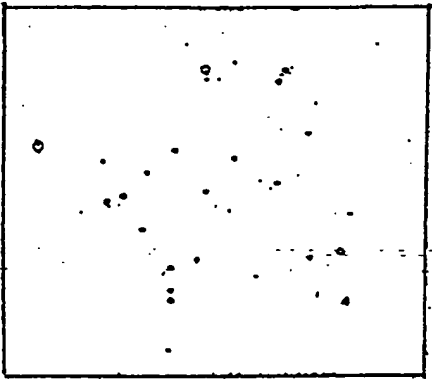
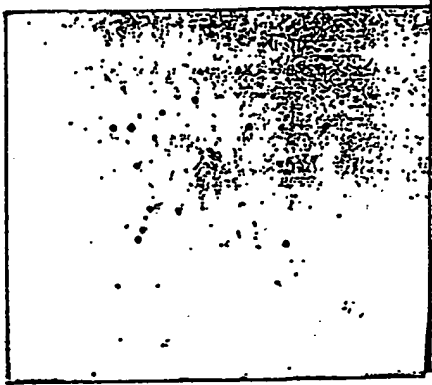


FIGURE 5

A



B

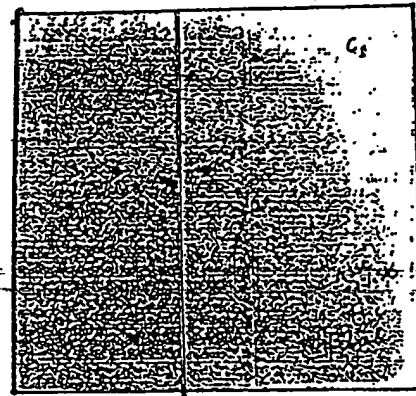


FIGURE 6

Total :13, 283 ESTs  
 Known: 6,283  
 Mitochondrial: 405  
 Ribosome: 498  
 Repeat: 868  
 Mis. : 156  
 Novel: 2,718

Cell Division

Cell Signalling/Communication

Cell structure/Motility

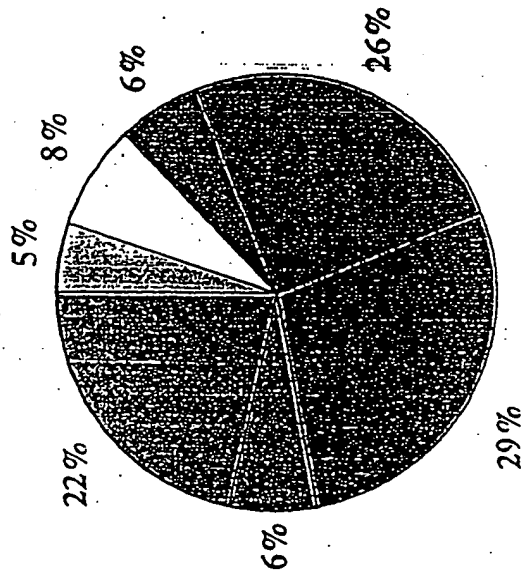
Cell/organism defense

Gene/Protein expression

Metabolism

Unclassified

### Human Blood



### Human Fetal Heart

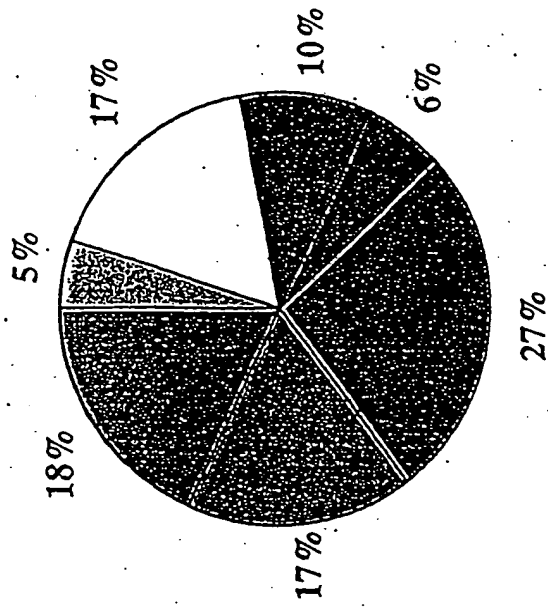
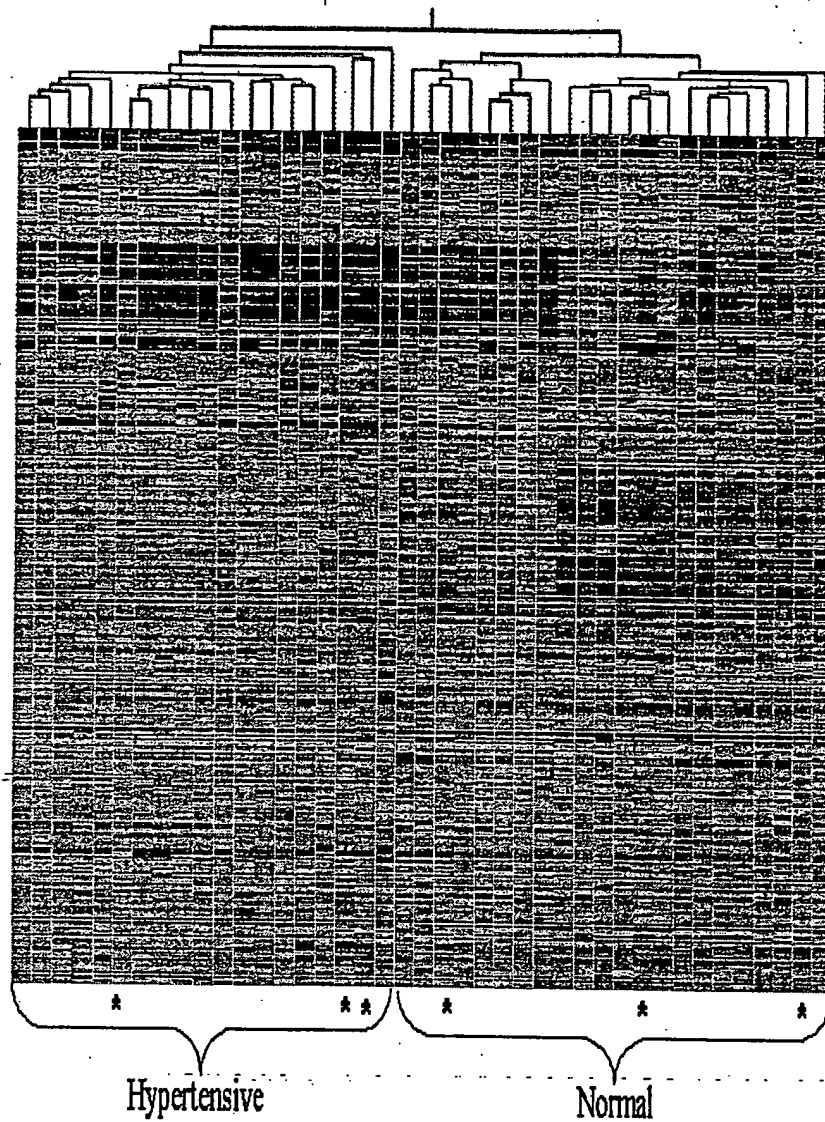


FIGURE 7



Figure 8

Hypertension



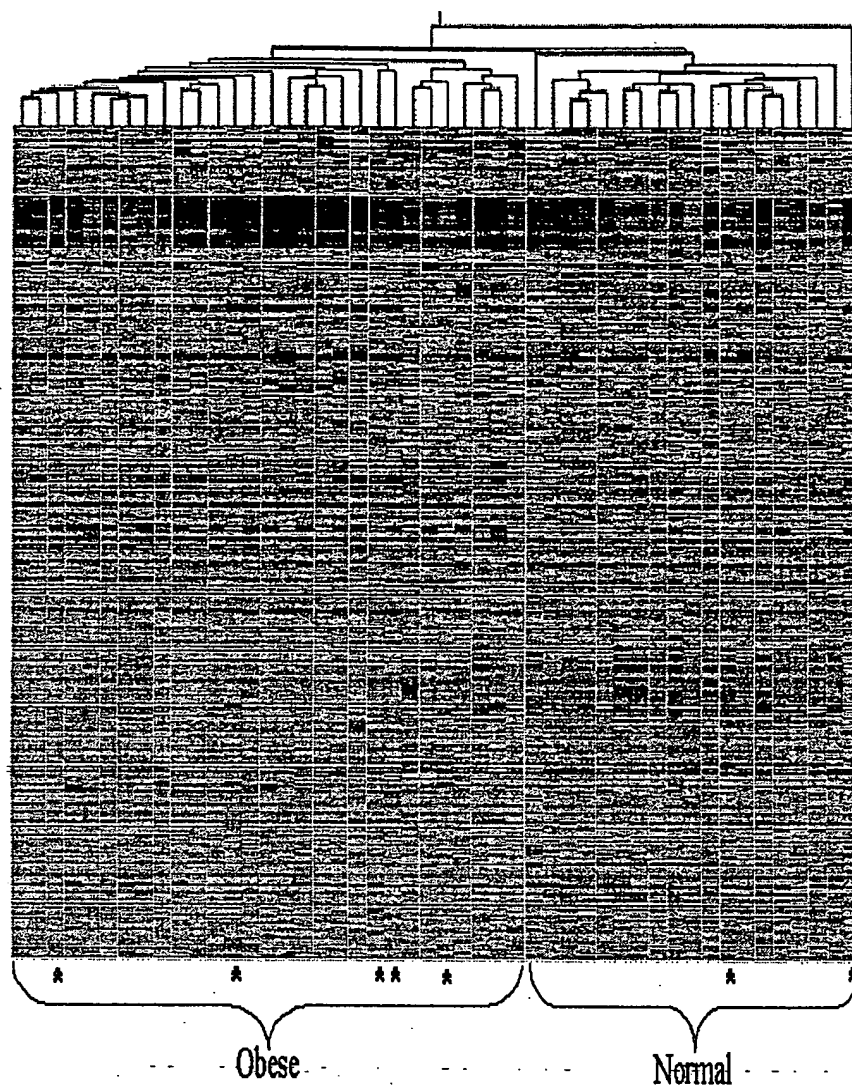
Hypertensive: 19

Normal: 22

Differentially Expressed Genes ( $p < 0.05$ ): 861

Figure 9

Obesity



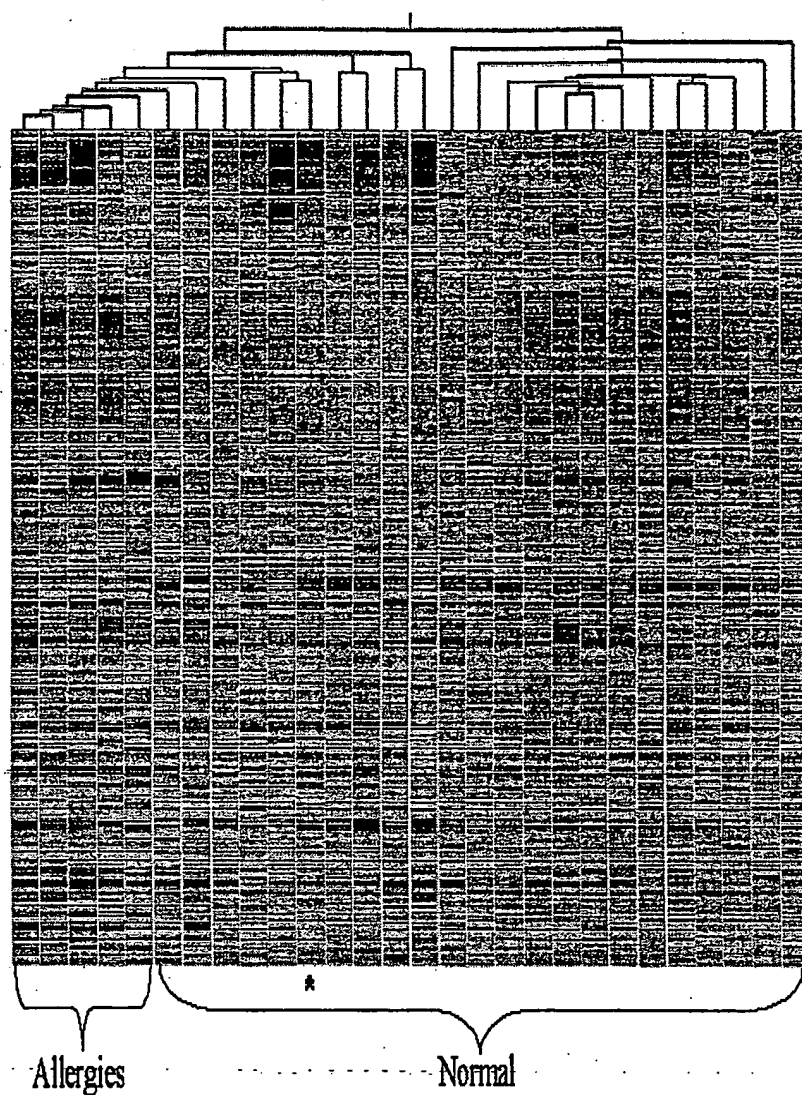
Obese: 25

Normal: 22

Differentially Expressed Genes ( $p < 0.05$ ): 913

Figure 10

Allergies



Allergies: 6

Normal: 22

Differentially Expressed Genes ( $p < 0.05$ ): 633

Figure 11

Systemic  
Steroids

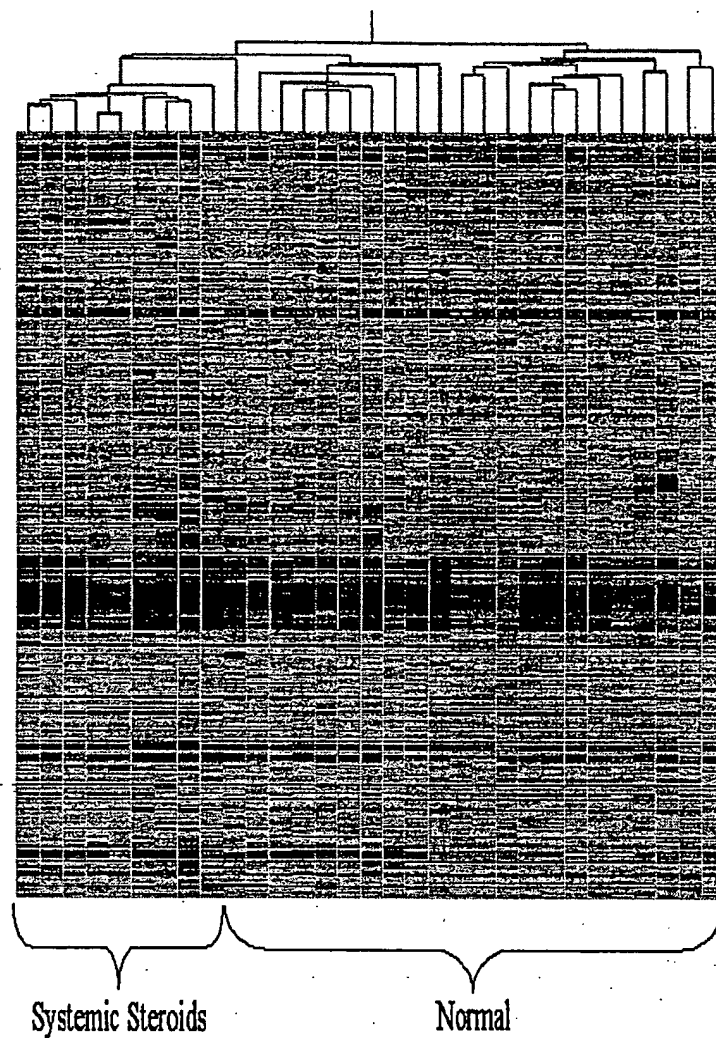
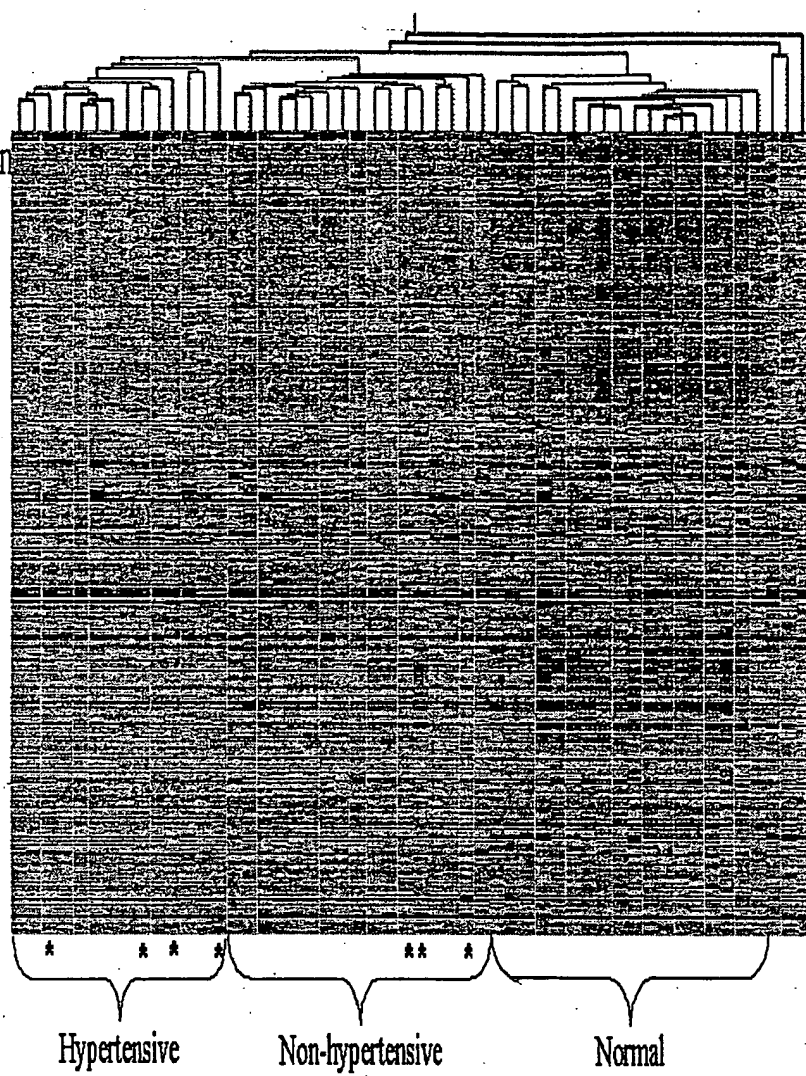


Figure 12

Hypertension



Hypertensive: 10

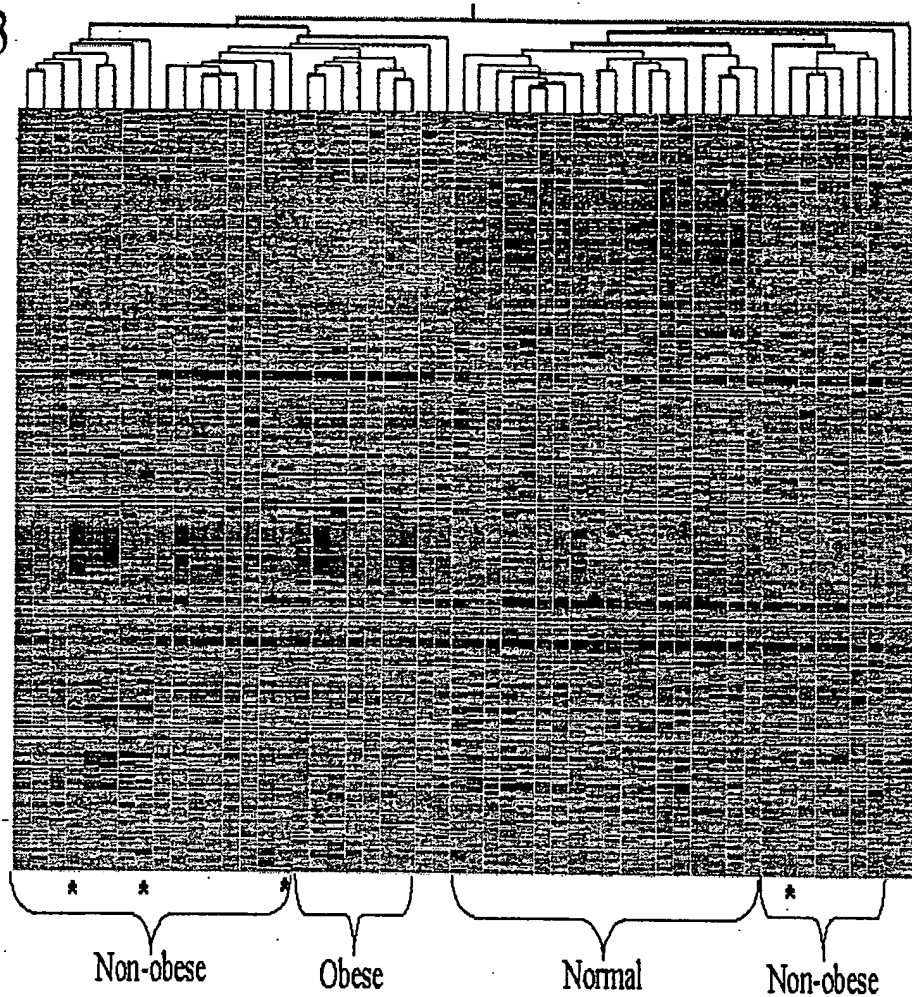
Non-hypertensive: 18

Normal: 24

Differentially Expressed Genes ( $p < 0.05$ ): 1,993

Figure 13

Obesity



Obese: 8

Non-obese: 20

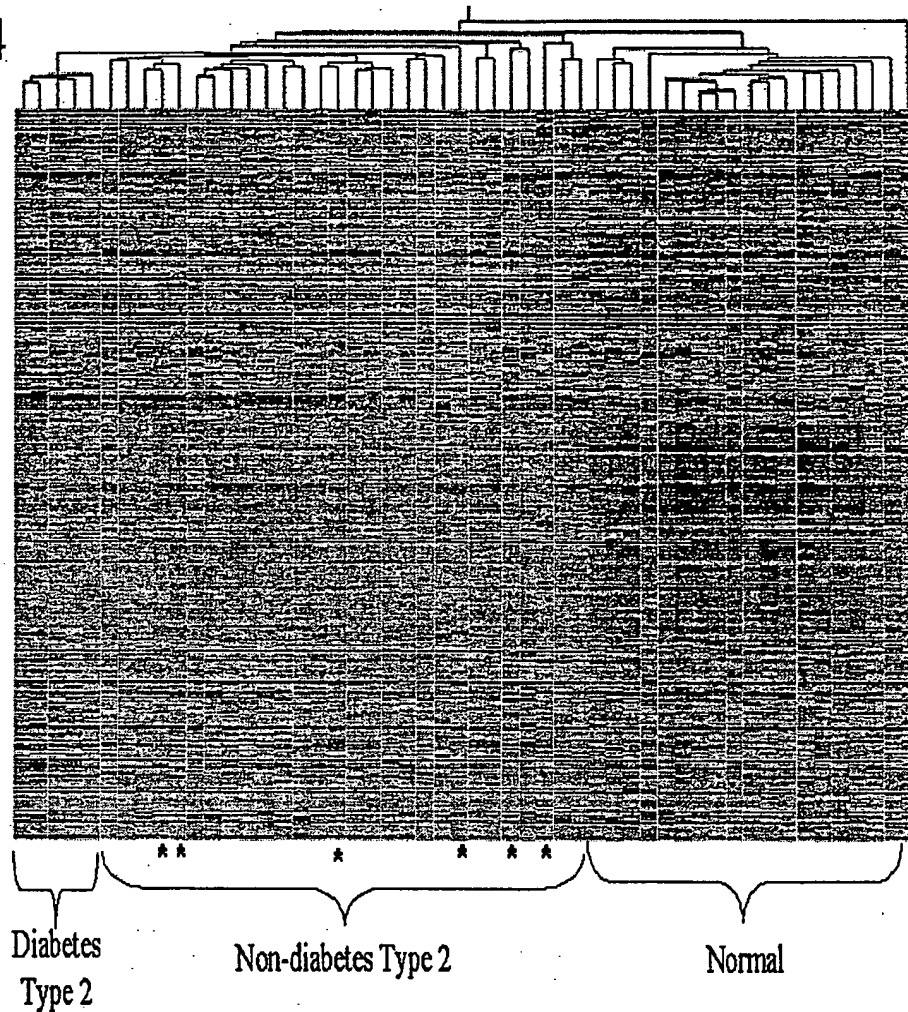
Normal: 24

Differentially Expressed Genes ( $p < 0.05$ ): 1,147

Figure 14

Diabetes

Type 2



Diabetes Type 2: 5

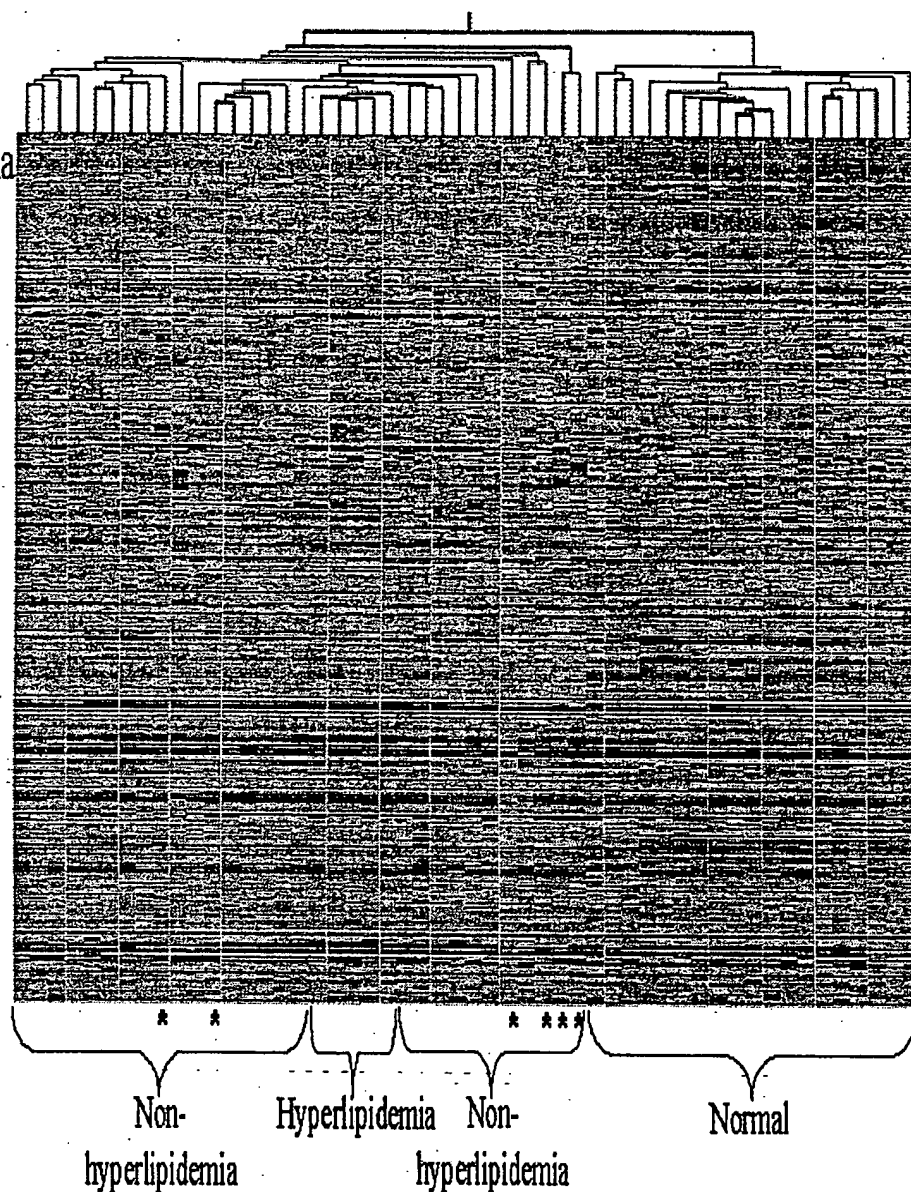
Non-diabetes Type 2: 23

Normal: 24

Differentially Expressed Genes ( $p < 0.05$ ): 915

Figure 15

Hyperlipidemia



Hyperlipidemia: 7

Non-hyperlipidemia: 21

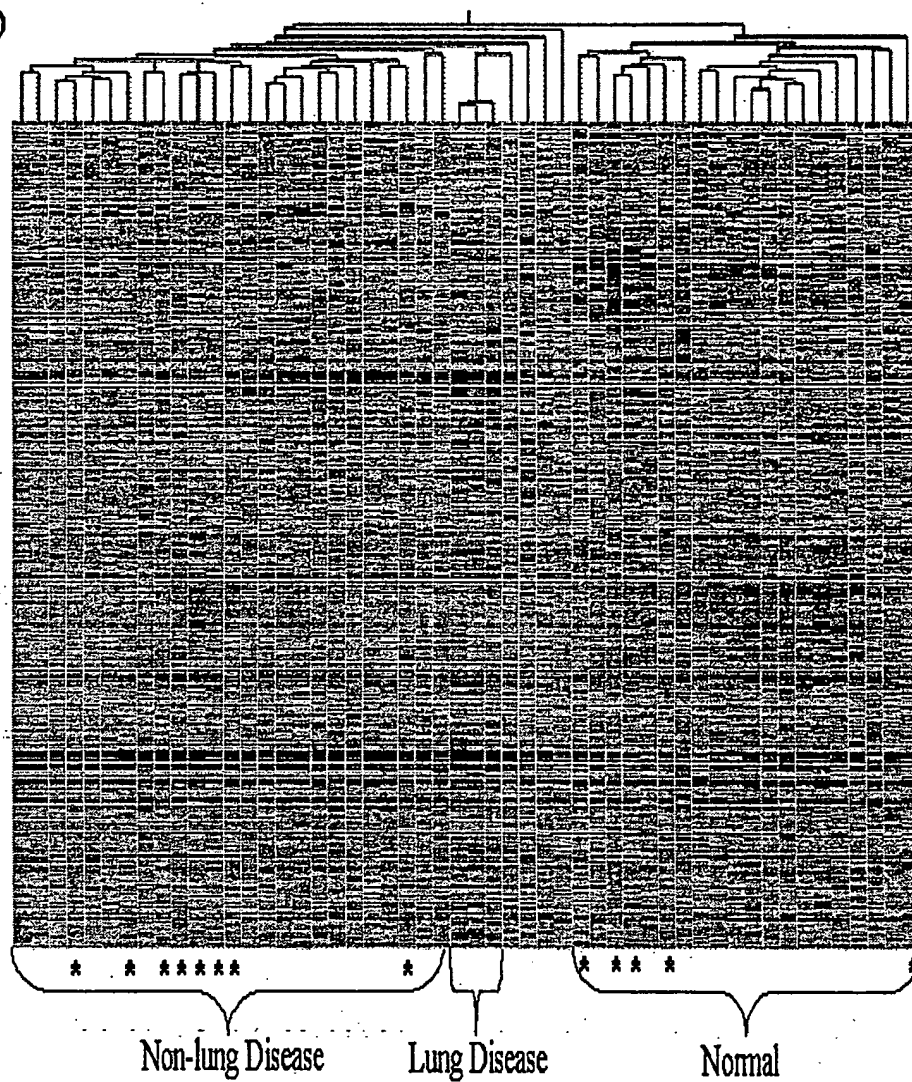
Normal: 24

Differentially Expressed Genes ( $p < 0.05$ ): 1,022



Figure 16

Lung  
Disease



Lung Disease: 3

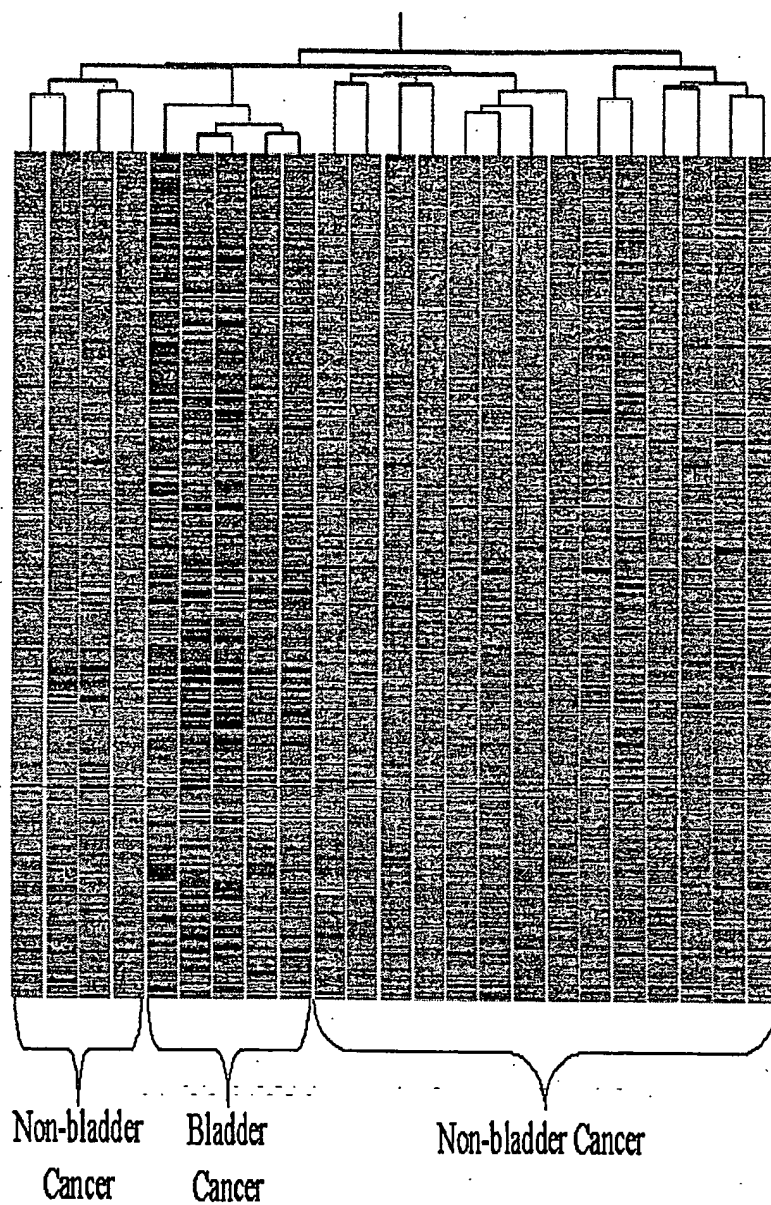
Non-lung Disease: 25

Normal: 24

Differentially Expressed Genes ( $p < 0.05$ ): 596

Figure 17

Bladder  
Cancer



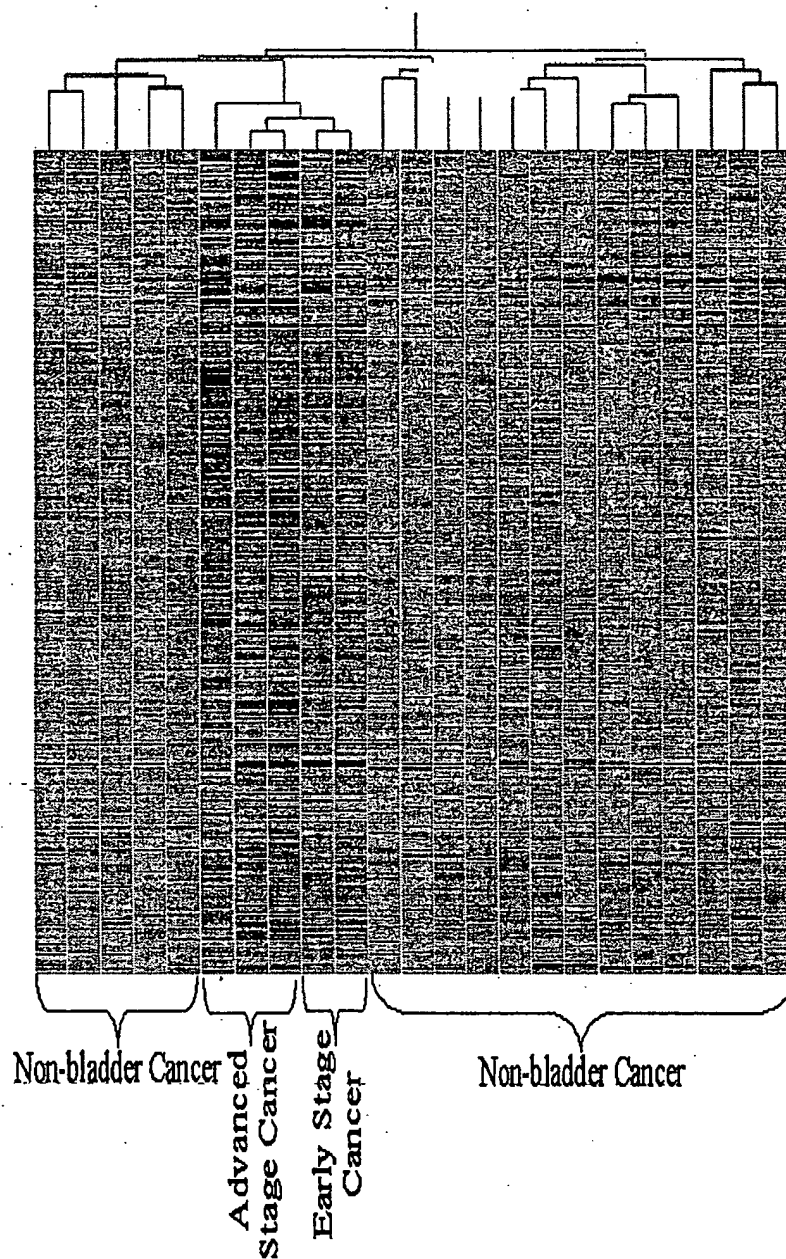
Bladder Cancer: 5

Non-bladder Cancer: 18

Differentially Expressed Genes ( $p < 0.05$ ): 4,228

Figure 18

Bladder  
Cancer



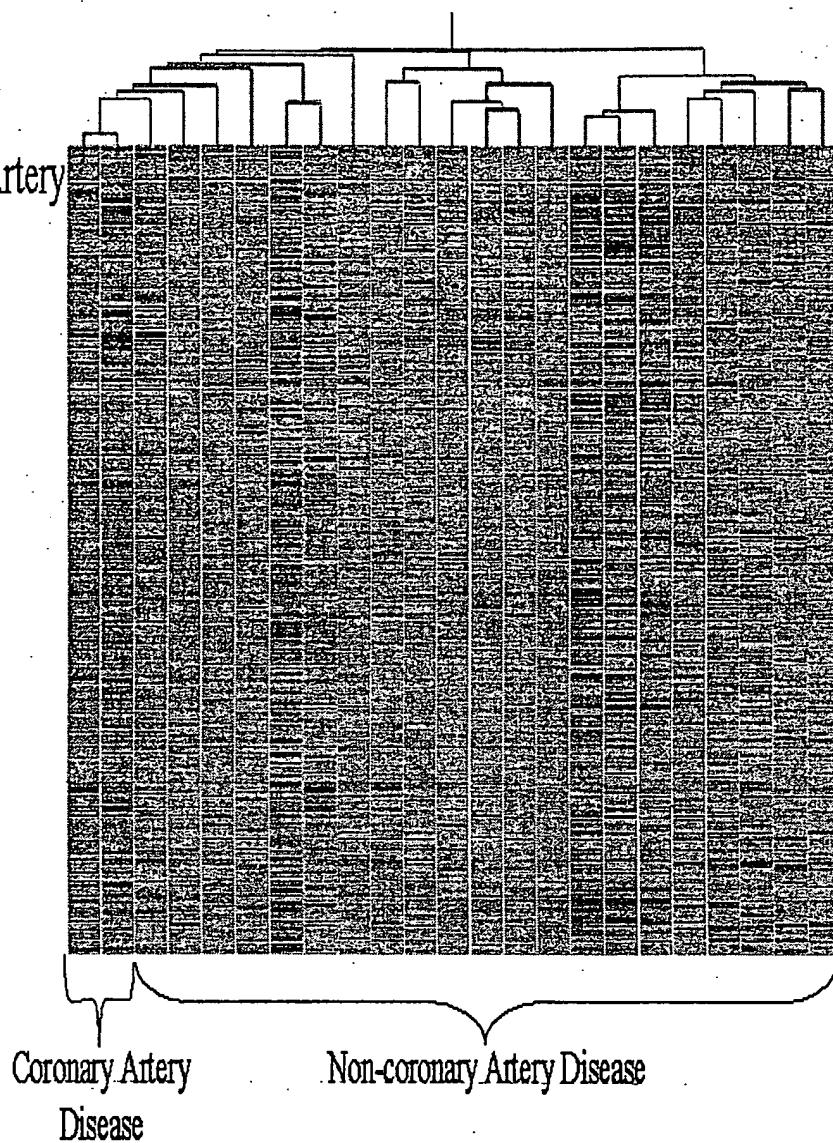
Bladder Cancer: 3 advanced stage, 2 early stage

Non-bladder Cancer: 18

Differentially Expressed Genes ( $p < 0.05$ ): 3,518

Figure 19

Coronary Artery  
Disease



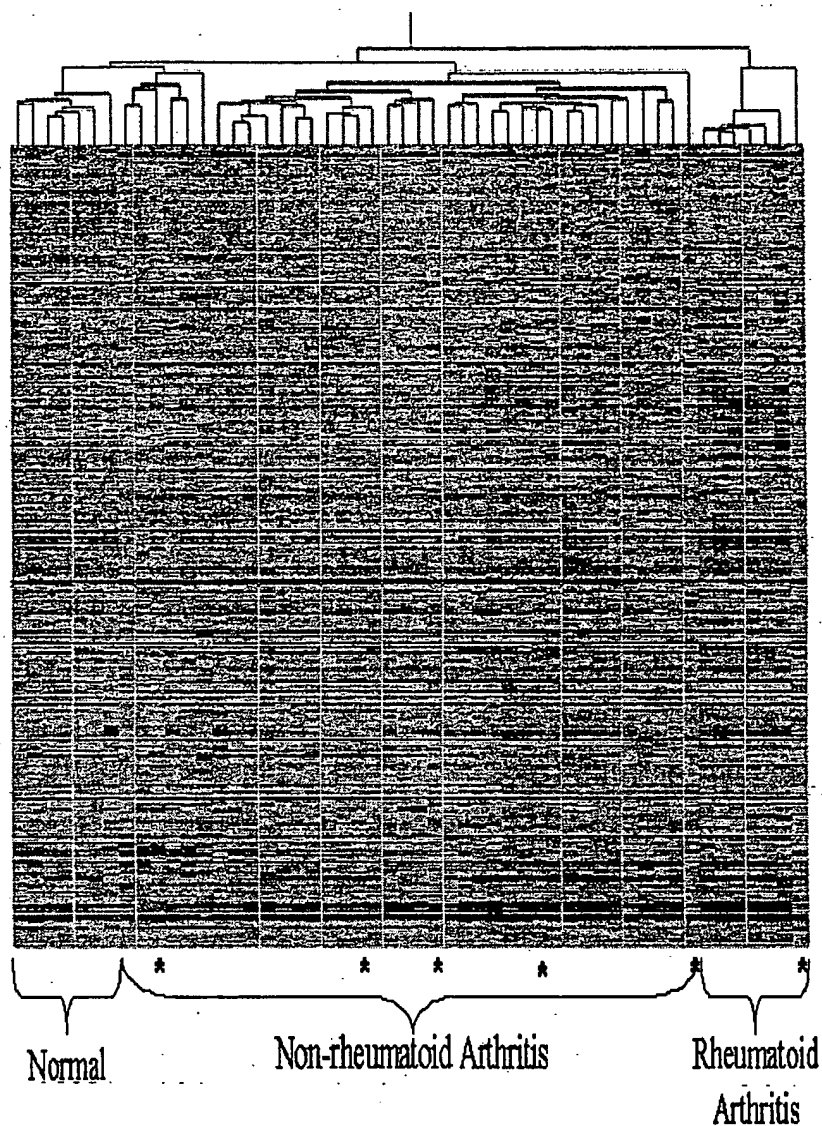
Coronary Artery Disease: 2

Non-coronary Artery Disease: 21

Differentially Expressed Genes ( $p < 0.05$ ): 967

Figure 20

Rheumatoid  
Arthritis



Rheumatoid Arthritis: 6

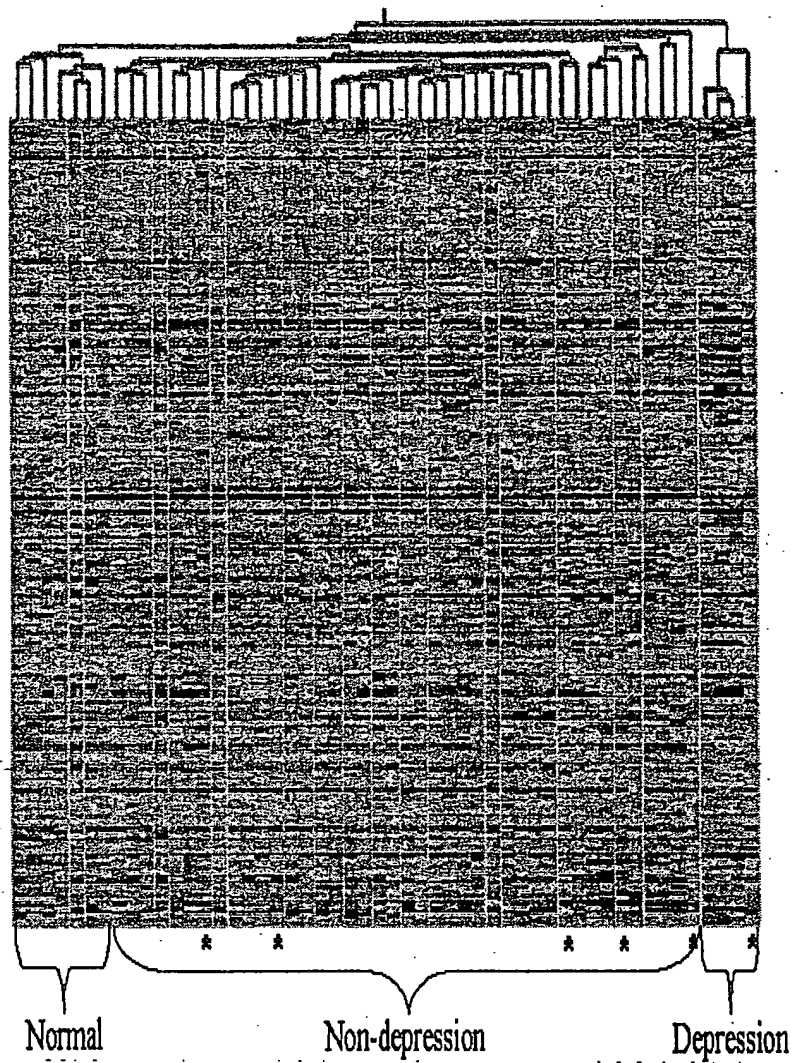
Non-rheumatoid Arthritis: 34

Normal: 12

Differentially Expressed Genes ( $p < 0.05$ ): 2,068

Figure 21

Depression



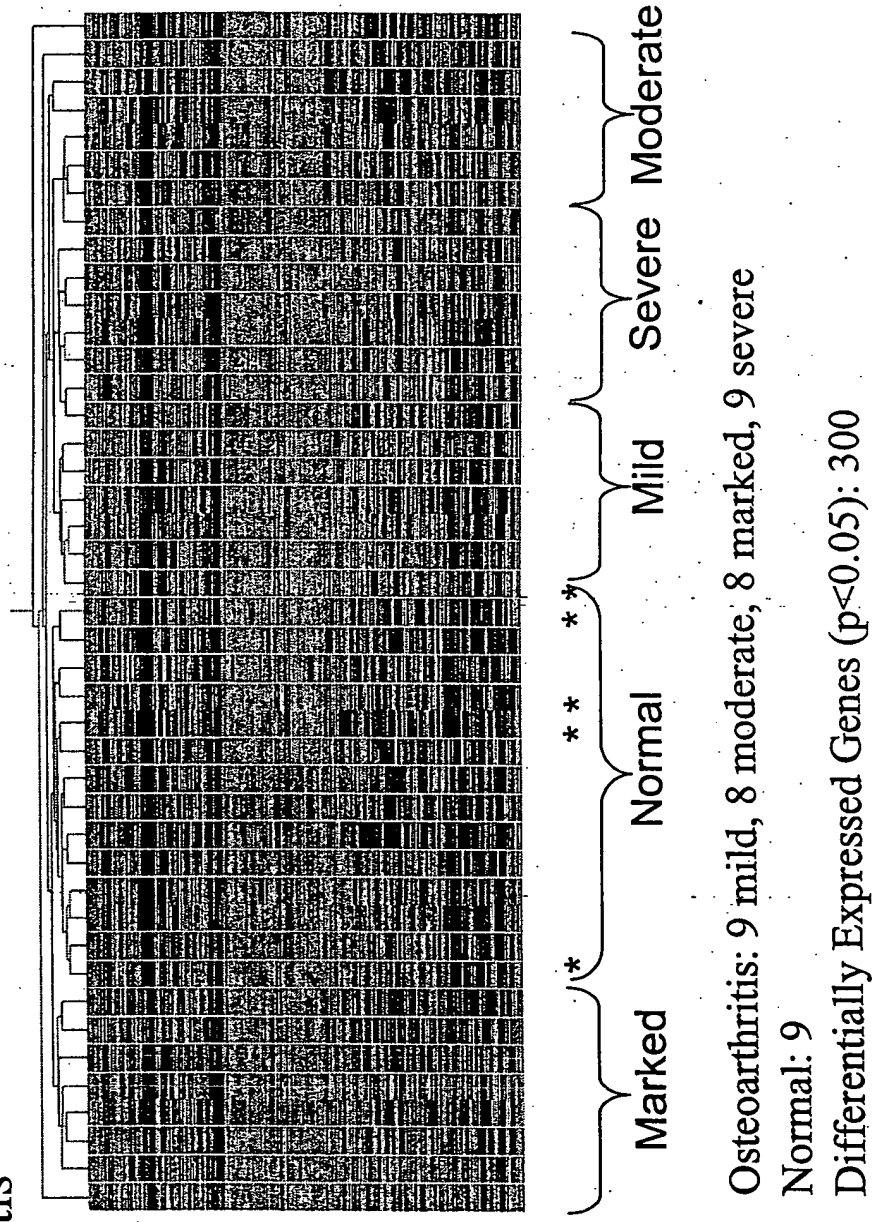
Depression: 3

Non-depression: 37

Normal: 12

Differentially Expressed Genes ( $p < 0.05$ ): 941

Figure 22  
Osteoarthritis



**Figure 23** RT-PCR of overexpressed genes in CAD peripheral blood cells identified using microarray experiments, including PBP, PF4 and F13A.

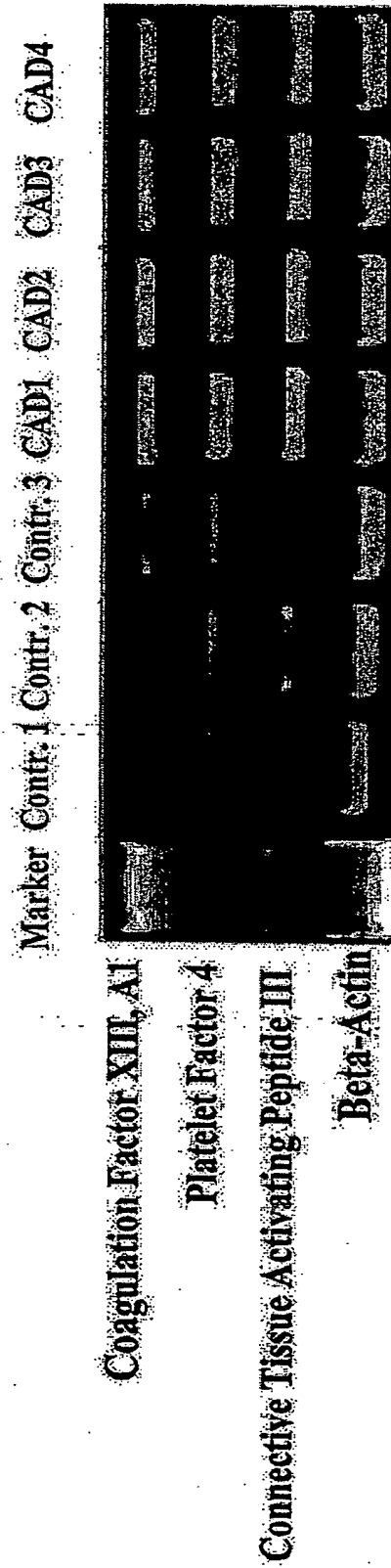
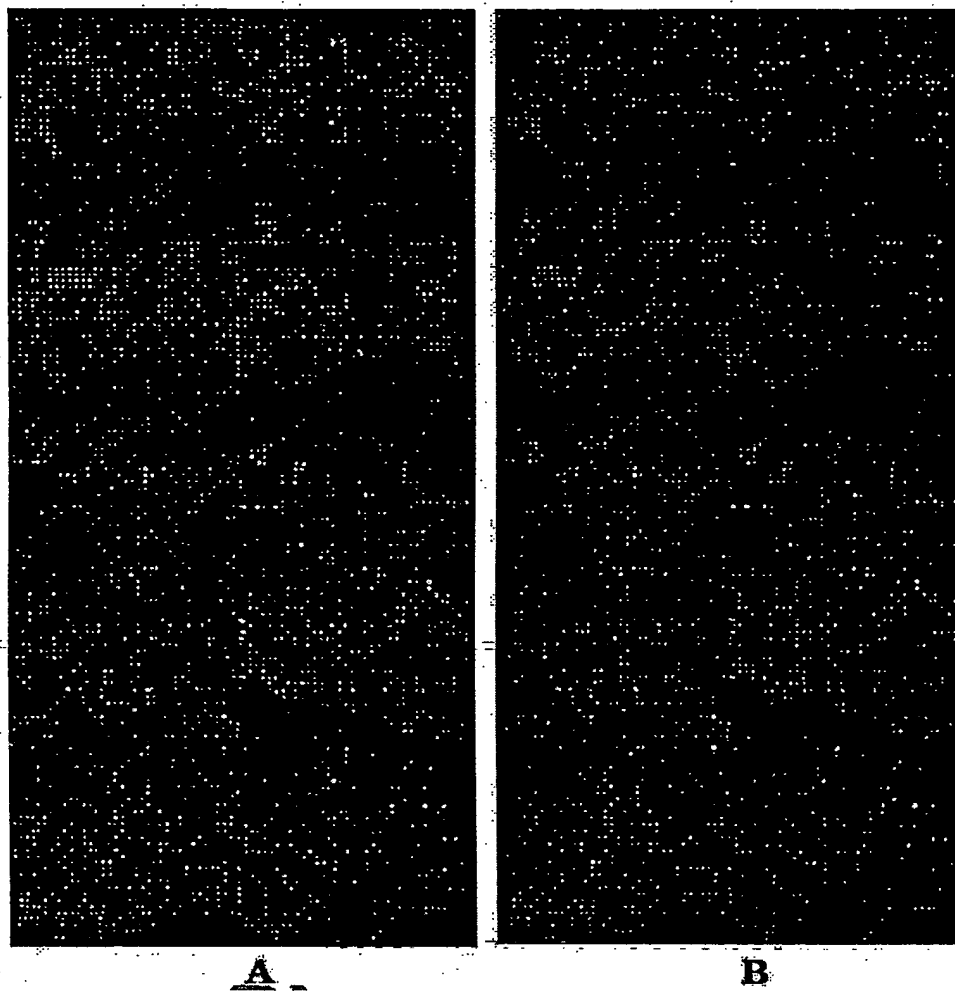


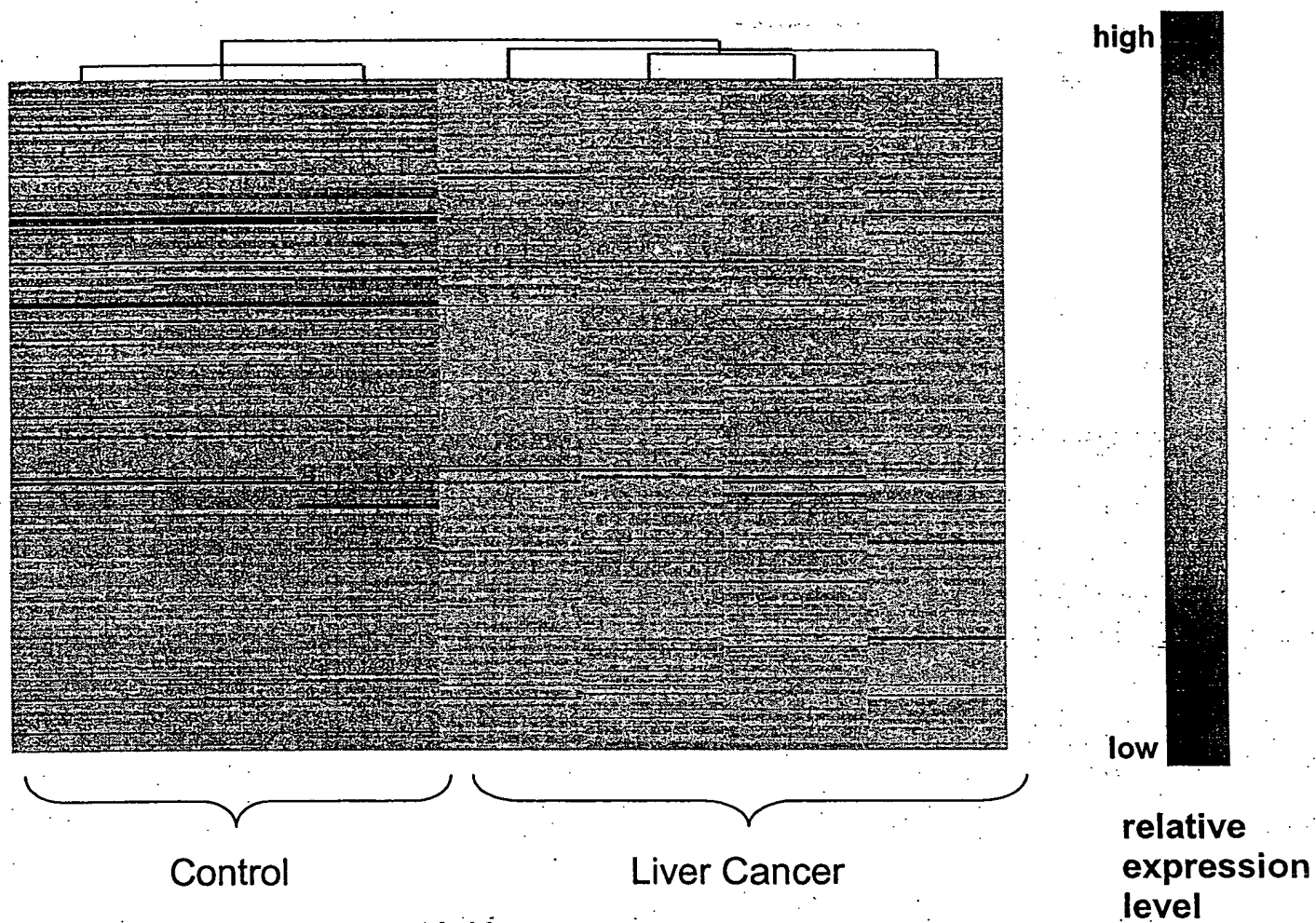


Figure 24



**Figure 25**

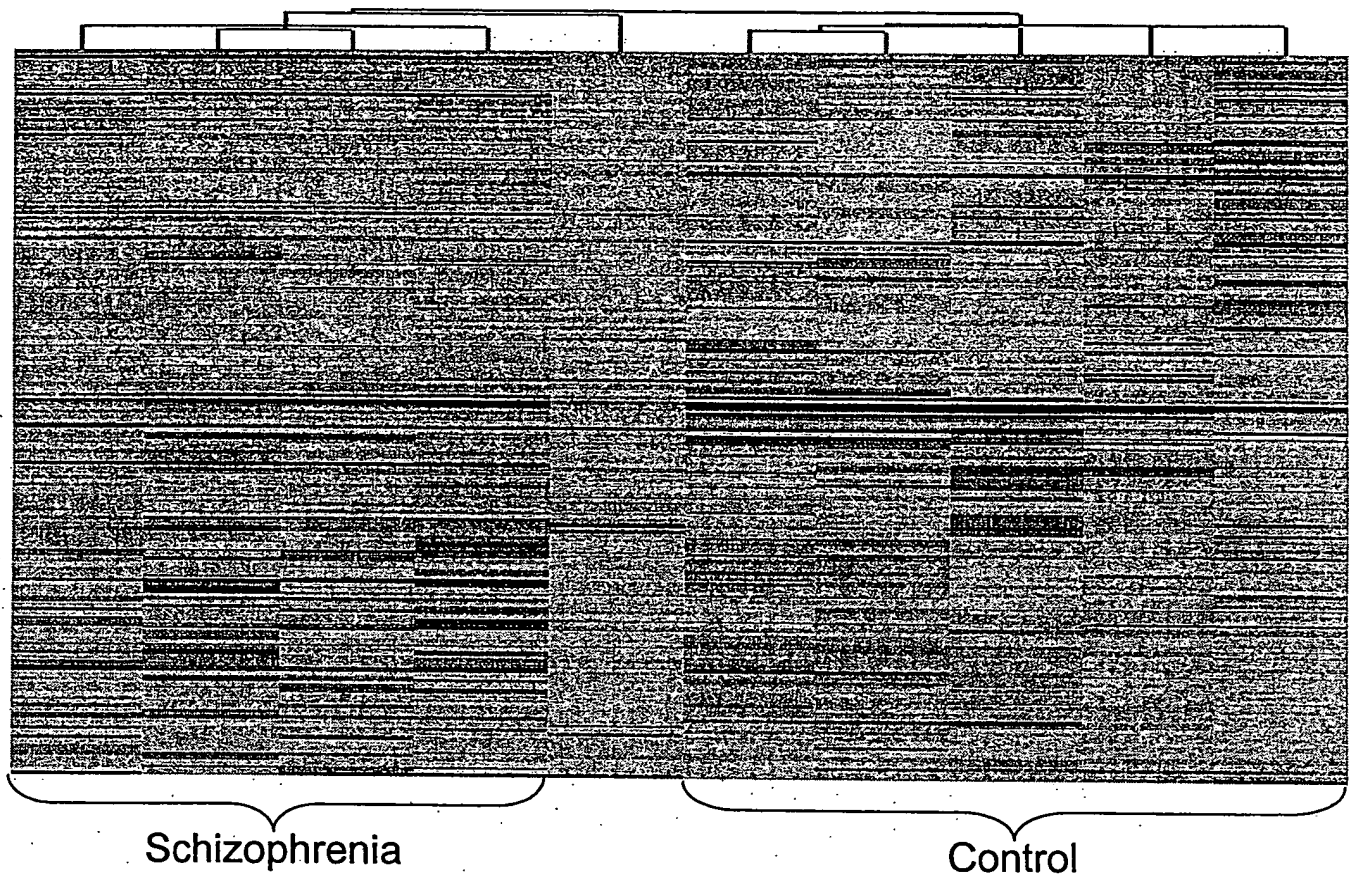
**Liver Cancer**



Control (red): n=3; Liver Cancer (orange): n=4

Figure 26

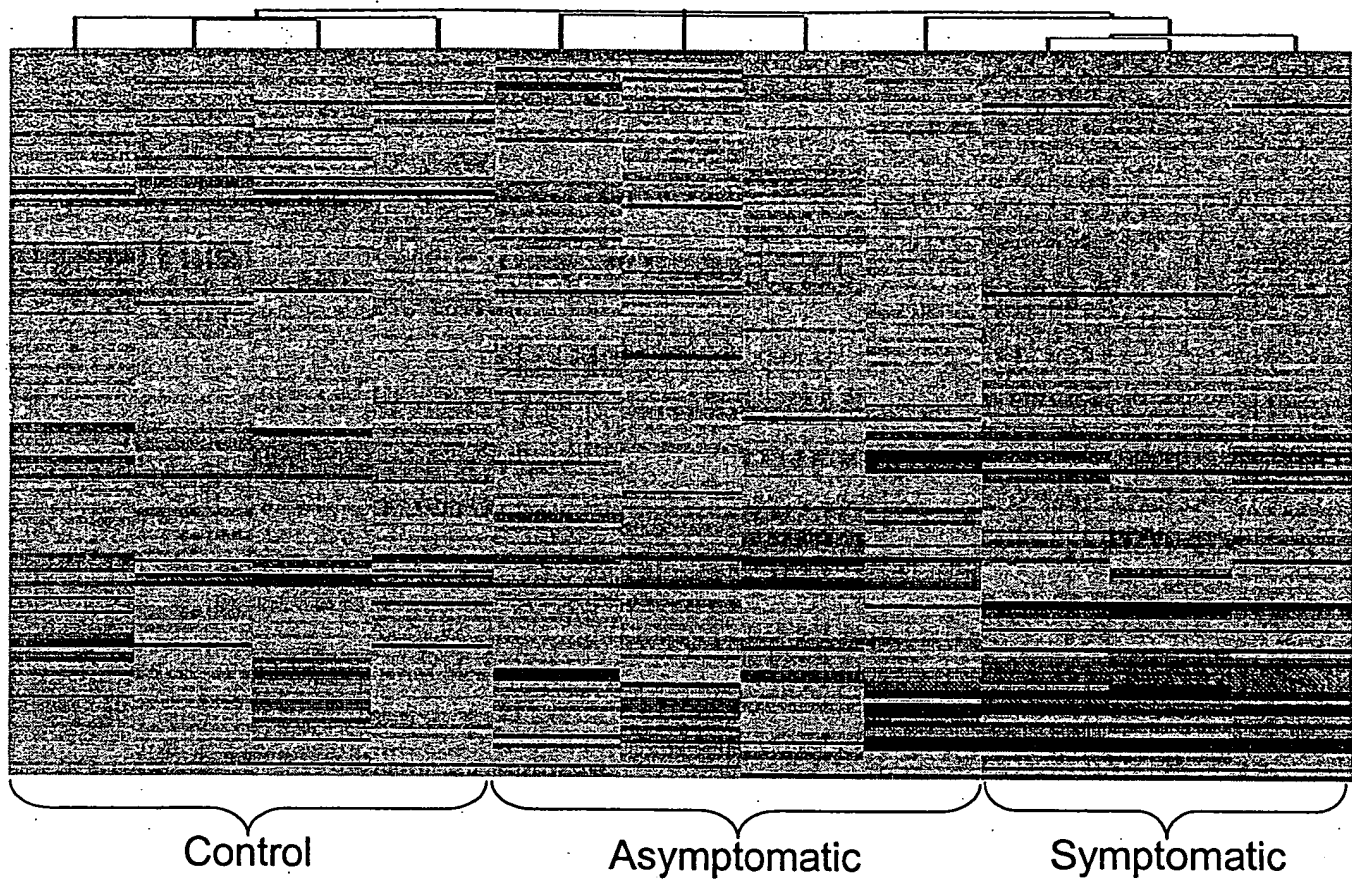
Schizophrenia



Control (red): n=6; Schizophrenia (orange): n=4

$p < 0.005$   
252 genes

**Figure 27**  
**Chagas Disease**

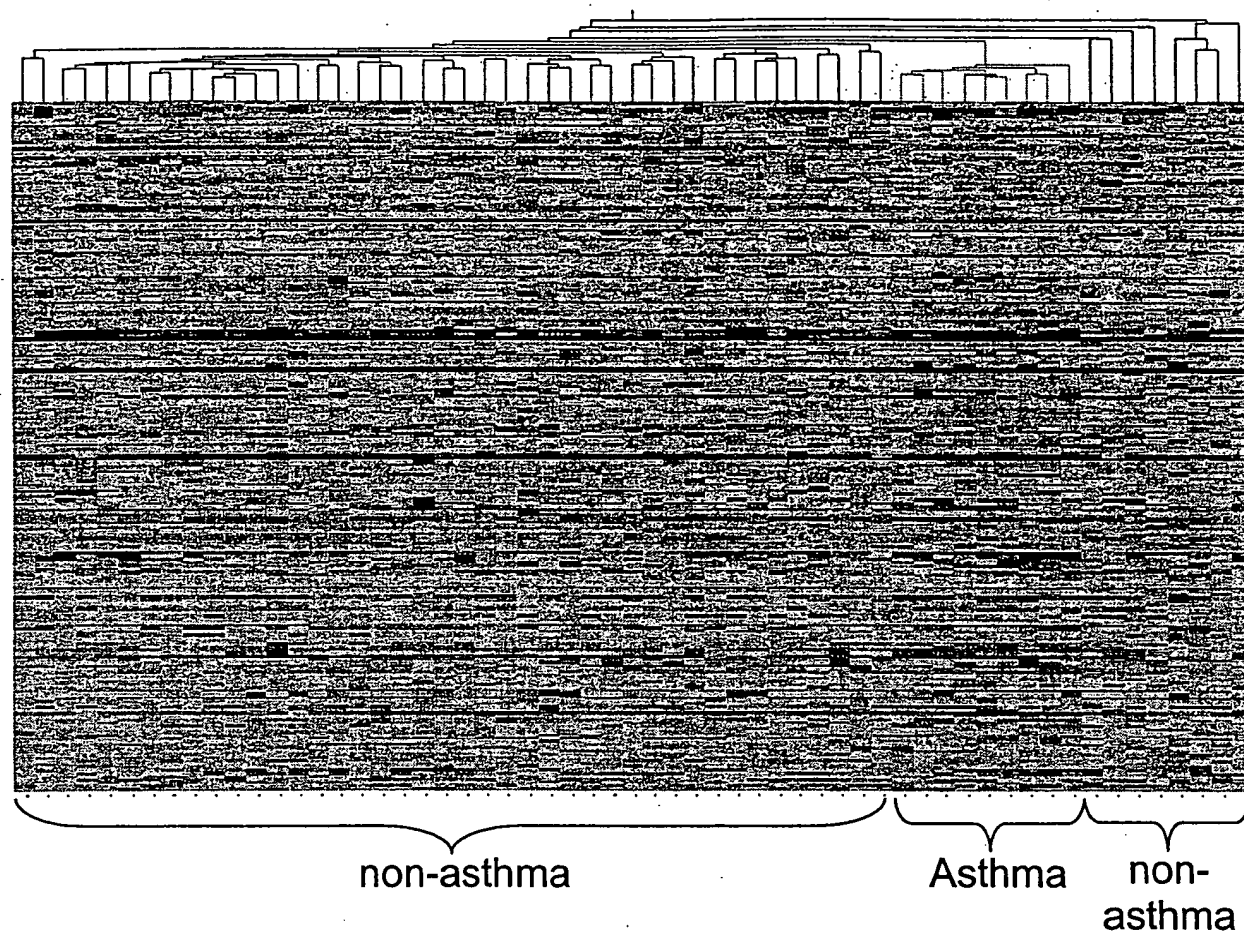


Control (orange): n=4; Chagas' asympt. (red): n=4;  
Chagas' sympt. (yellow): n=3

$p < 0.01$   
155 genes

**Figure 28**

**Asthma**



Asthma: n=9 Non-asthma: n=50

$p < 0.05$   
219 genes

Figure 29

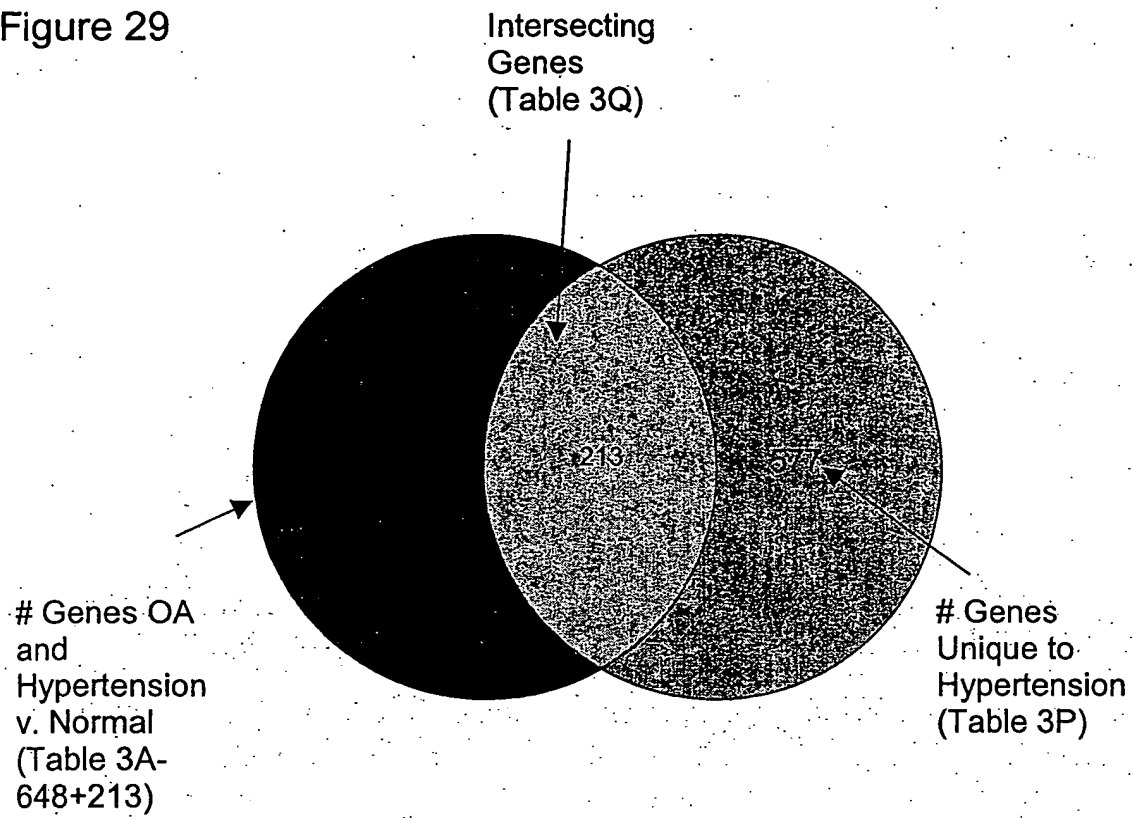


Figure 30

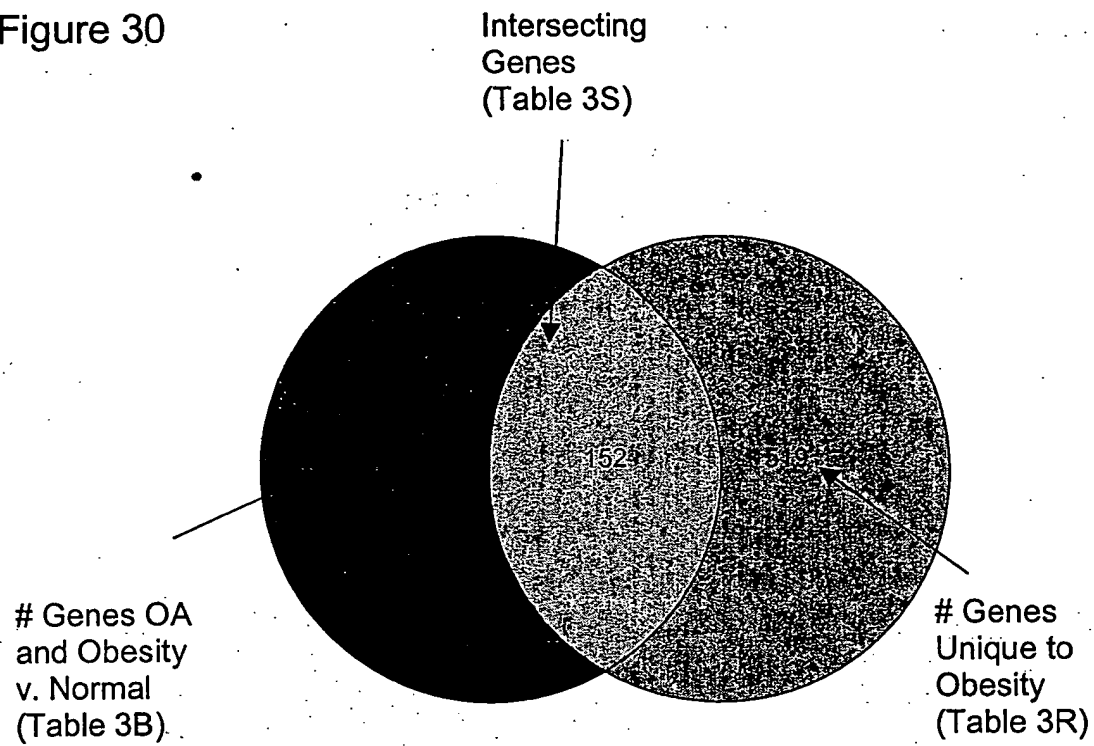


Figure 31

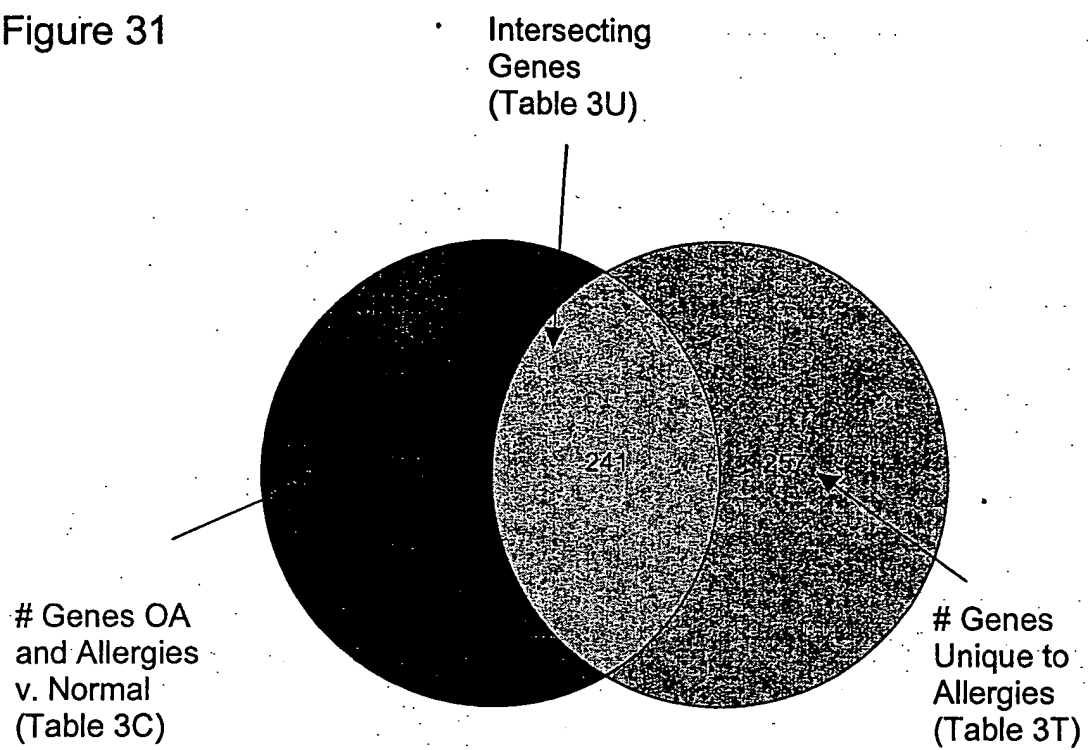




Figure 32

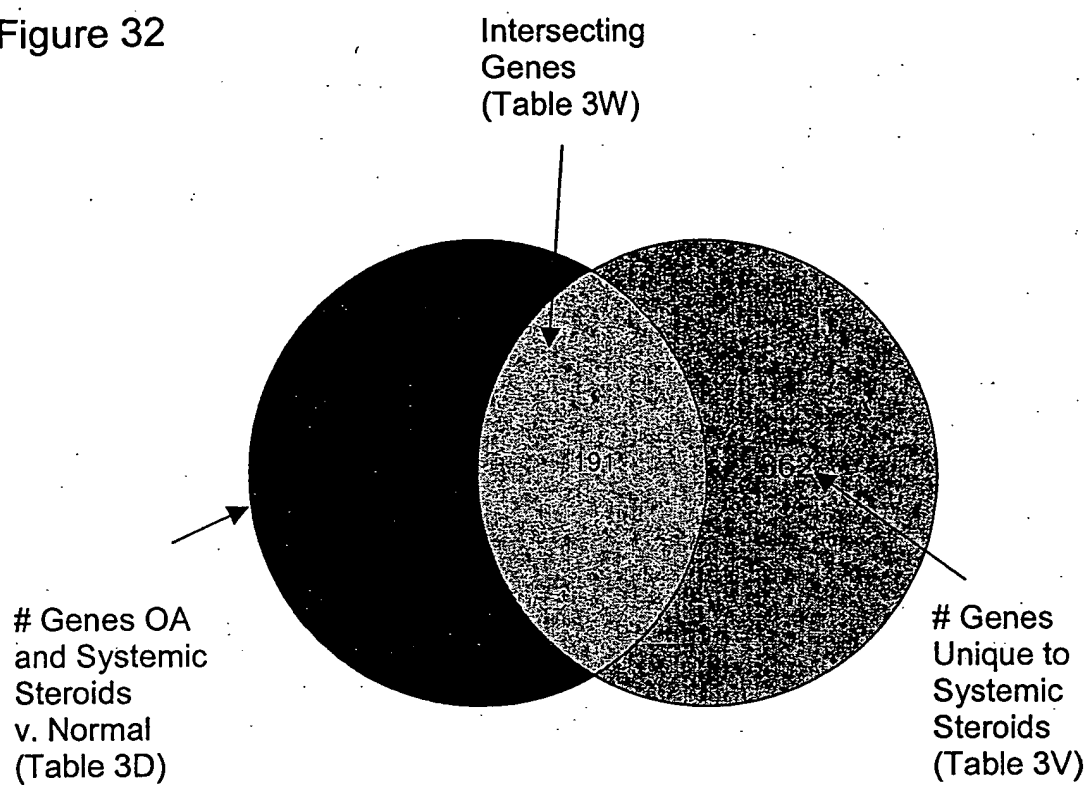
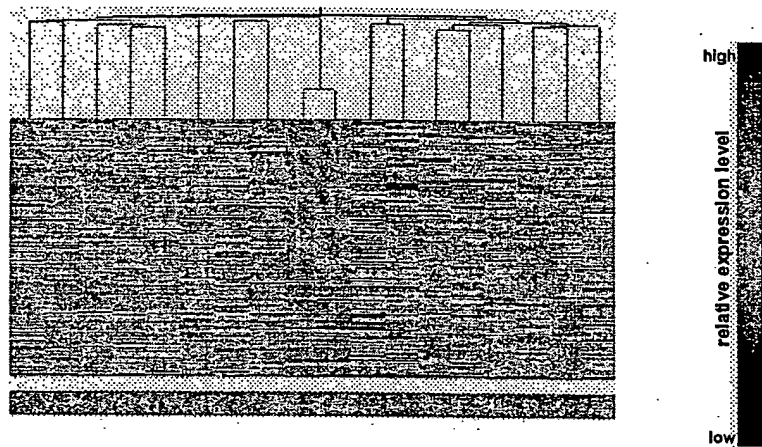


Figure 33

### Schizophrenia, Batch 2 vs. MDS



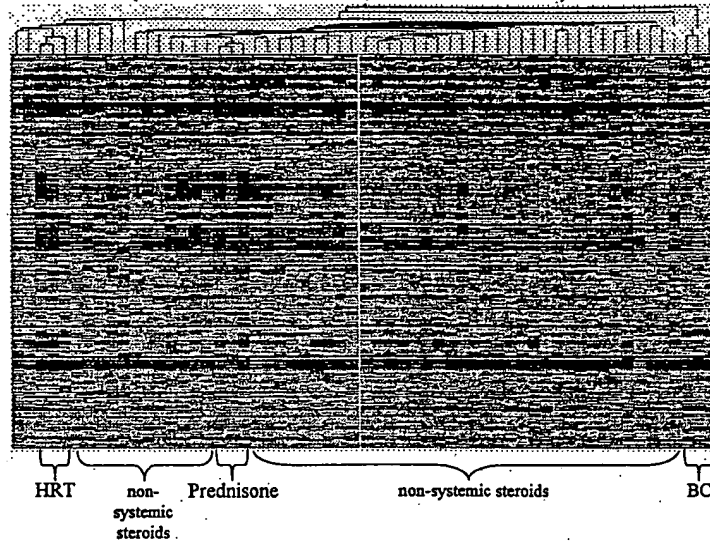
$p < 0.05$   
294 genes

Schizophrenia (yellow):  $n=16$ ; MDS (blue):  $n=2$

MDS = Manic Depression Syndrome

Figure 34

OA Blood Samples Co-morbidities Study: Systemic Steroid Groups  
(n=59: mild OA blood-29, severe OA blood-30)



Systemic Steroids (n=9): 3 prednisone, 3 birth control, 3 hormone replacement therapy

Non-systemic steroids: 50

Differentially Expressed Genes ( $p < 0.05$ ): 396

HRT = hormone replacement therapy; BC = birth control